Subbasin Review Process: Summary

A. Introduction

Ecosystem Review at the Subbasin Scale (Subbasin Review) is one step in a hierarchical assessment process that applies broad-scale science findings and decisions to finer-scale areas by understanding ecosystem status (the condition of the ecosystem relative to historical conditions), risks to its status from natural events and management actions, and opportunities to conserve and restore the ecosystem. The goal is to consistently and effectively manage risks to the ecosystem and capitalize on opportunities to conserve and restore them.

No single assessment can adequately address the complex issues facing resource managers today. Fine-scale assessments provide necessary context for management and project planning, but they cannot adequately address broad patterns and processes, such as habitat conditions for wide-ranging species. Broad-scale assessments provide necessary context for policy formulation and for mid- and fine-scale assessments but cannot, by themselves, provide detailed information, such as site-specific habitat conditions. Together, multiple-scaled assessments provide a comprehensive basis for sustainable land management.

Four geographic levels of review/ assessments are intended to provide the context to appropriately implement broad-scale decisions on individual National Forests and BLM Districts. They include:

* Broad-scale (such as *Assessment of Ecosystem Components in the Interior Columbia Basin*)
* Mid-scale (Ecosystem Review at the Subbasin Scale);
* Fine-scale (Ecosystem Analysis at the Watershed Scale);
* Site-scale (project/site analysis, including NEPA analysis).

The mid-scale review is the first step down from the broad-scale in the hierarchical approach of understanding ecosystem processes and functions. Information developed through mid-scale review provides beneficial context for locating projects that meet multiple management objectives, including reducing risks to sensitive or unique resources. The guide describes a dynamic process which can be used to update reviews as knowledge, information and situations change through time.

Mid-scale or subbasin scale refers to 4th-field Hydrologic Unit Codes (HUC) (500,000 to 1,000,000 acres, approximately) or groups of 4th-field HUCs (from 1,000,000 to 5,000,000 acres). The *Assessment of Ecosystem Components in the Interior Columbia Basin* (Quigley and Arbelbide 1997) found that the mid-scale is important for addressing management of ecosystem components because many important relationships and patterns are evident only at this scale. Ecosystem Review at the Subbasin Scale (Subbasin Review) is a mid-scale look at ecosystem processes and functions to bridge the gap between broad-scale information and decisions (such as that in the ICBEMP), and finer-scale Ecosystem Analysis at the Watershed Scale (10,000 to 100,000 acres, approximately), and actual on-the-ground management actions.

Subbasin Review is not a detailed mid-scale analysis. It is a review of mid-scale issues and a priority-setting tool to identify and prioritize where to do more detailed mid- and finer-scaled analysis if found necessary during the review. Subbasin Review also is not a decision-making process, but rather a stage-setting process. The results of Subbasin Review establish the *context* for subsequent decision-making processes, including planning, project development, and regulatory compliance. Outcomes from the review do not constitute a stand alone planning process; rather, the review is an integrated effort that supports other existing planning and assessment processes. Subbasin Review generally is not expected to provide sufficient information by itself to support management decisions.

The review process may identify further mid-scale analysis or assessment needs, but the limited time frames for the review may preclude exhaustive analysis during the review period. Recommendations from the review can point out further assessment needs important at the mid- or finer scales. Where possible, locations of these further needs should be mapped and made available for later use. It is entirely possible that the review recommendations will be constrained by lack of data. If additional data is critical to making recommendations to address issues identified in the review, management activities may need to be postponed or modified until data can be developed to address the issue.

B. Objectives of Subbasin Review

The objectives of ecosystem review at the subbasin scale are to:

- Assess resource status and condition, as well as risks and opportunities to reduce potential unwanted effects from management actions and land uses (for example, road-related adverse effects) and to better balance short- and long-term, and mid- and fine-scale risks;
- Provide an understanding of how the review area fits into the broad-scale ecosystem, gain an understanding of the ecosystem that is apparent only at the mid-scale, and provide context and priority for finer scale analysis;
- Provide support for other analyses and initiatives such as EAWS, roads analysis, water quality restoration plans, the Healthy Rangelands Initiative, and further mid-scale assessment needs;
- Identify risks and opportunities to meet broad-scale and mid-scale objectives through subsequent site-specific management actions;
- Identify opportunities for pooling interagency (Federal agencies) and intergovernmental (tribes, States, counties, cities) resources;
- Provide information and recommendations to support land use planning, consultation, and legal requirements, such as those found in FLPMA, NFMA, treaty/trust objectives, Endangered Species Act (ESA), and Clean Water Act (CWA);
- Verify or provide mid-scale data where projected or unavailable from ICBEMP, and identify data gaps at the mid-scale; and
- Prioritize opportunities for ecosystem restoration, for filling social and economic needs, for further analysis, for monitoring and data collection, and for other subsequent site-specific management actions.

C. Subbasin Review Approach

The review process is expected to:

- Use a collaborative interagency and intergovernmental approach;
- Be a brief review (four to eight weeks of concentrated team time) extended over sufficient time to accomplish the objectives of Subbasin Review (up to six months);
- Use existing information to conduct the review and identify critical data gaps;
- Allow the complexity of the issues and availability of information to determine intensity of the review;
- Be conducted in conjunction with other types of mid-scale assessments when there are efficiency opportunities (e.g., during land use planning);
- Be a dynamic process whereby risks, opportunities, and priorities are collaboratively revisited when significant new information becomes available, new issues arise, or conditions change; and
- Where available, use existing mid-scale assessments to meet Subbasin Review intent to the extent possible.

In this guide, the review is organized into five steps to help explain the process. Step 1 is a getting ready process and step 5 is documentation phase. The three middle steps (Steps 2 through 4) are an iterative process. The identified issues (from Step 2) in combination with an understanding of the review area's character (Step 3) help teams to develop recommendations and prioritize future activities (Step 4). As new knowledge is gained in each step, it may be necessary to return to previous steps to incorporate new information before moving forward.

Following is a summary of the five steps that are portrayed in Figure 1.

Step 1: Preparing for Review

The purpose of step one is to lay the ground work for the actual review. Since the review is conducted collaboratively with other affected Federal agencies, State and local governments, and Indian tribes, extensive preparations are needed before the review can begin.

Step 2: Identifying Mid-scale Issues

The purpose of step two is to focus the review on mid-scale issues within the review area and to link the review area to the broad-scale findings and direction.

Step 3: Describing the Mid-scale Character

The purpose of step three is to gain an understanding of the review area relative to the issues identified in step two. A description of mid-scale character includes a general understanding of the review area relative to features and processes occurring at the broader scale and across neighboring subbasins, as well as characterization of current conditions and trends within the review area.

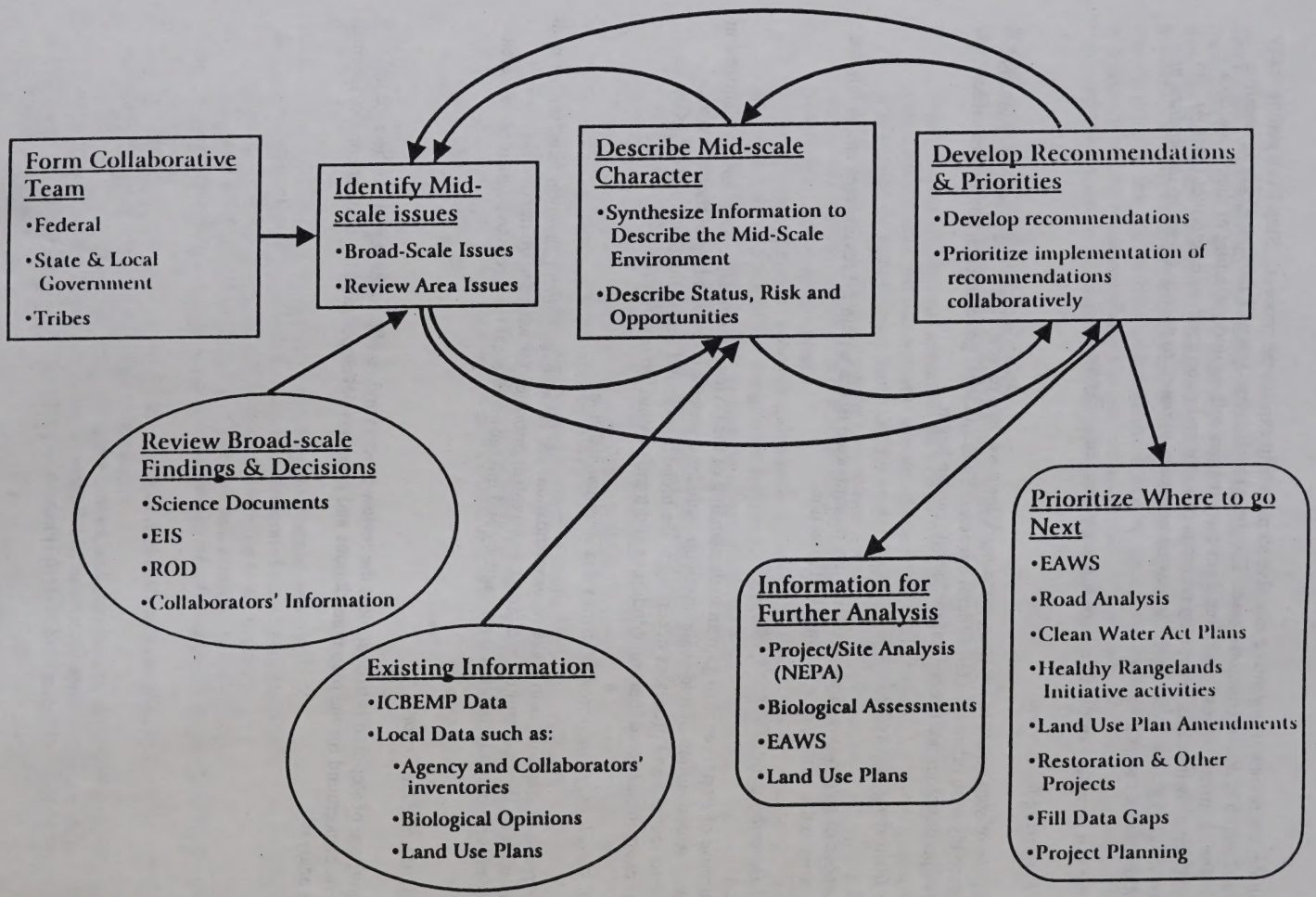
Step 4: Developing Integrated Priorities and Recommendations

The purpose of step four is to make recommendations for future management attention (e.g., further mid- or fine-scale analyses or project planning), to establish priorities for where to go next, and to collaboratively commit to pooling interagency and intergovernmental resources to address review area issues.

Step 5: Writing the Report

The purpose of step five is to document the review process and results so the report can be used to provide background for the recommendations and priorities developed, and be used for context for finer-scale analysis.

Figure 1. Subbasin Review Process



SUBBASIN REVIEW
EAST FORK OF THE SALMON RIVER SUBBASIN

The following are observations of Renee' Snyder, Field Manager for the Challis Resource Area, on the East Fork of the Salmon River Subbasin Review. The East Fork subbasin is an area in which there are listed salmon, steelhead and bull trout; it is an area of significance to the Shoshone-Bannock Tribe; supports a well established livestock grazing industry; and has a history that is rich in mining (although no significant active mining is currently occurring). It is also a gateway into the Boulder-White Cloud portion of the Sawtooth National Recreation Area.

I guess one of the big things I saw that we got out of the process was that we finally got all the players, BLM, FS, NMFS, FWS, the ShoBan Tribe, IDF&G and a big one, Custer County to sit down at the table and talk frankly about what the issues are in the subbasin, what's at stake and what our highest priorities for attention would be. This is not a decision making document, so I believe by removing the turf associated with making allocations, it was easier to have open discussion. We walked away with a good sense of what the current situation is, what's at risk, what kinds of opportunities do we have to solve some of the problems out there, and a clear set of priorities on where to go first to start the next round of watershed analysis. This last is very important because there are finite resources and we can't each be off doing what may necessarily be OUR own individual priority if we can't get the support we need of some of our collaborators because they're off working on something else. We had been continually at odds with the Forest Service trying to set the priority where to do EAWS and then pointing the finger when we couldn't meet their internally set priority. This process put us all on equal footing.

Another thing that the Subbasin Review Process gave us was a sense of community. Large scale plans like ICBEMP have a tendency to lose the identity and economic importance of small communities like Salmon or Challis to an area. Compare them on a bigger regional scale to Boise or Spokane and of course they're blips on the screen. However, they are ***very*** *important economically to a several thousand square mile area. EAWS are too site specific to even mention many of the socioeconomic issues in a meaningful way. Subbasin Review is the only assessment scale we have that really seems to catch it.*

I don't think there were really any surprises other than how easy it was to agree on the priority for where to go next for EAWS, once all the information had been presented in a succinct and orderly manner. And, except for the ***time*** *it takes to complete a review - that takes away from visible accomplishment and change on the ground (the same old planning dilemma) there weren't too many down sides.*

One word of caution: I would say that unless a group takes to heart the commitment to bring to the table ***all of the collaborators****, doing a subbasin review would be a waste of time.*

Highlights of the Lemhi Subbasin Review

March 1999

Preface and Acknowledgments

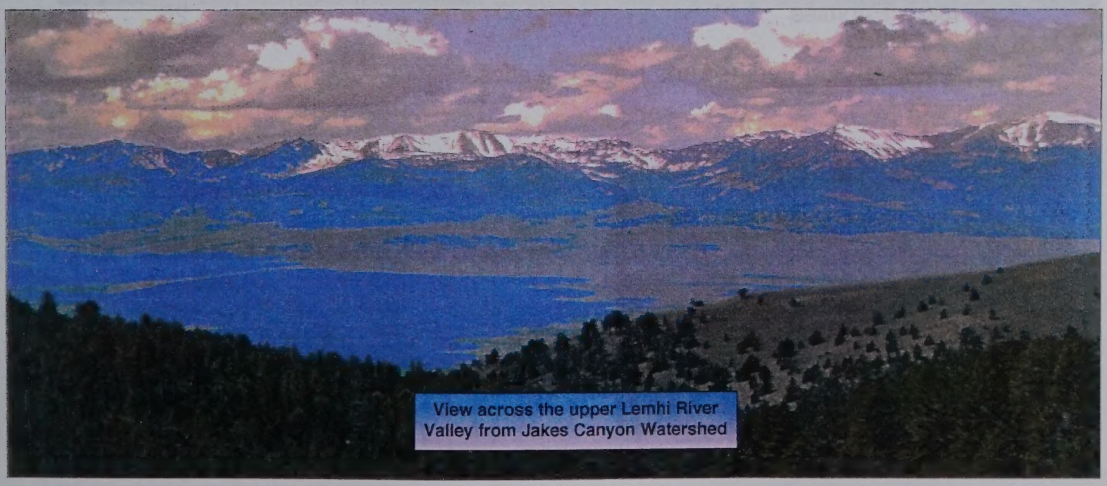
Numerous people contributed to the completion of this document. First, to the members of the Riparian Habitat Conservation Agreement Principal Working Group - Thank you. This group, and especially Dave McFarland, played a crucial role in facilitating communication between federal, state, and private entities. This allowed for a comprehensive look at the entire Lemhi Subbasin. Without this assistance and guidance the effort would have been another agency only effort.

Numerous other collaborators participated including: the Shoshone-Bannock Tribes, federal agencies (Bureau of Land Management, Fish and Wildlife Service, Forest Service, National Marine Fisheries Service, Environmental Protection Agency, National Resources Conservation Service, Soil Conservation Commission), state agencies (Dept. of Fish and Game, Dept. of Water Resources, Division of Environmental Quality) and Lemhi County entities (Model Watershed Project, County Commissioners, Agriculture Extension Agent, Grazing Advisory Board, and Cattle and Horse Growers Association). These groups, among others, provided valuable insight and knowledge of the Lemhi Subbasin and were willing to share their experiences. Thank you for the openness and frank discussions about the ecological and economic conditions within the area. Thank you also goes to the managers of the Salmon/Challis National Forest and Leadore Ranger District and the Upper Columbia-Salmon Clearwater District and Lemhi Resource Area who believed in and supported the process.

Lastly a great thanks goes to the Core Team Members listed below. These people took the nuts and bolts and made them into a useable product. Thank you!

***Core Team Members*:**

Lynn Bennett	Salmon/Challis National Forest (FS)	Forest/Fire Ecology
Steve Beverlin	Lemhi Resource Area (BLM)	Co-Team Leader
Joe Butsick	Leadore Ranger District (FS)	Wildlife
Glenn Elzinga	Lemhi Resource Area (BLM)	Forest
Scott Feldhausen	Lemhi Resource Area (BLM)	Aquatic/Riparian
Vince Guyer	Lemhi Resource Area (BLM)	Aquatic/Riparian
Keith Johnson	Salmon Field Office (BLM)	GIS/Forest
Richard Madril	Leadore Ranger District (FS)	Rangelands/Weeds
Jeff Maser	Soil Conservation Commission	Water Quality
Kathe Rhodes	Salmon Field Office (BLM)	Co-Team Leader
Norma Staaf	Leadore Ranger District (FS)	Human Uses
Jude Trapani	Lemhi Resource Area (BLM)	Aquatic/Riparian



View across the upper Lemhi River Valley from Jakes Canyon Watershed

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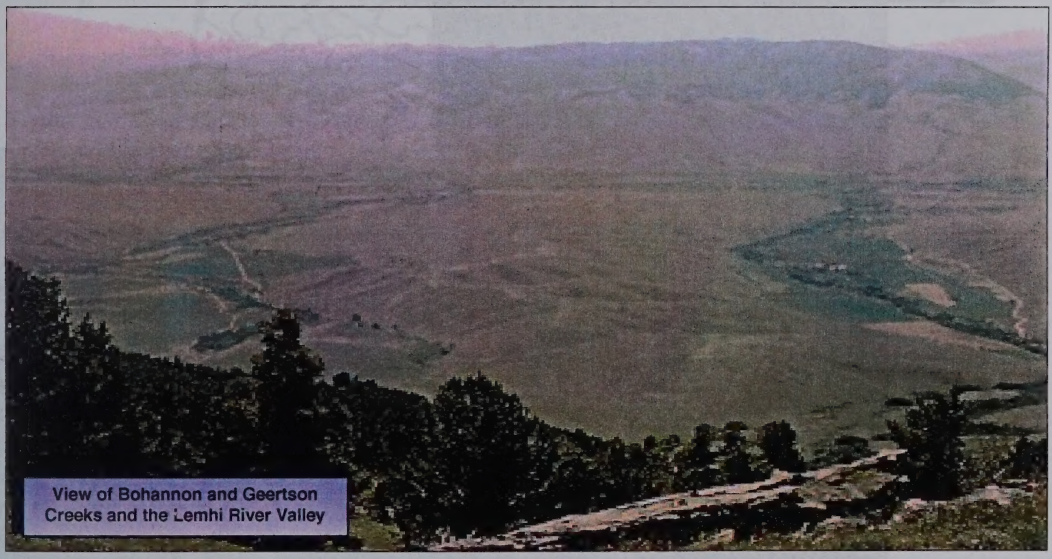
Project Description

Purpose:

To identify issues, characterize the ecological and social conditions and trends, and prioritize future management opportunities within the Lemhi River Subbasin using a collaborative approach.

This document will be used by all federal, state, and private entities with management responsibilities within the Lemhi Subbasin. It will serve as an information source for all Lemhi County. It is intended to give general guidance when addressing site specific resource concerns or needs. It is not a NEPA document. To the extent possible, all land ownerships were considered.



View of Bohannon and Geertson Creeks and the Lemhi River Valley

Objectives:

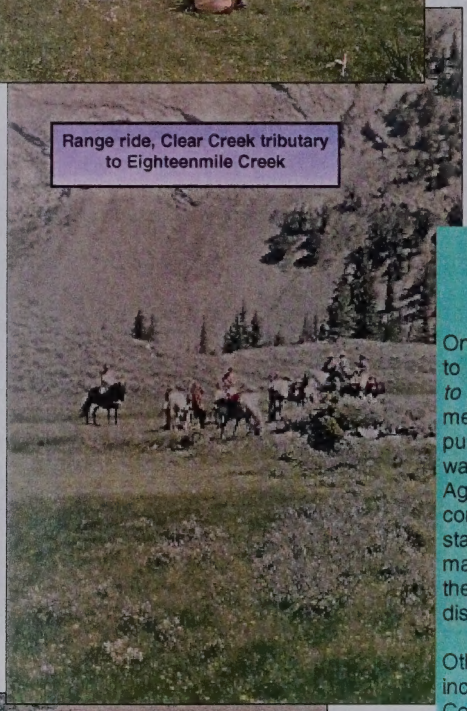
① **Characterize current conditions and trends within the Lemhi River Subbasin in terms of ecological and social/economic factors.**

② **Assess the potential risk of degrading existing ecological conditions.**

③ **Prioritize opportunities for improving resource conditions based on all factors including existing and future human uses.**

Project Description

Riparian condition tour, Cow Creek, tributary to Agency Creek



Range ride, Clear Creek tributary to Eighteenmile Creek

Management Effectiveness Monitoring

Public Involvement

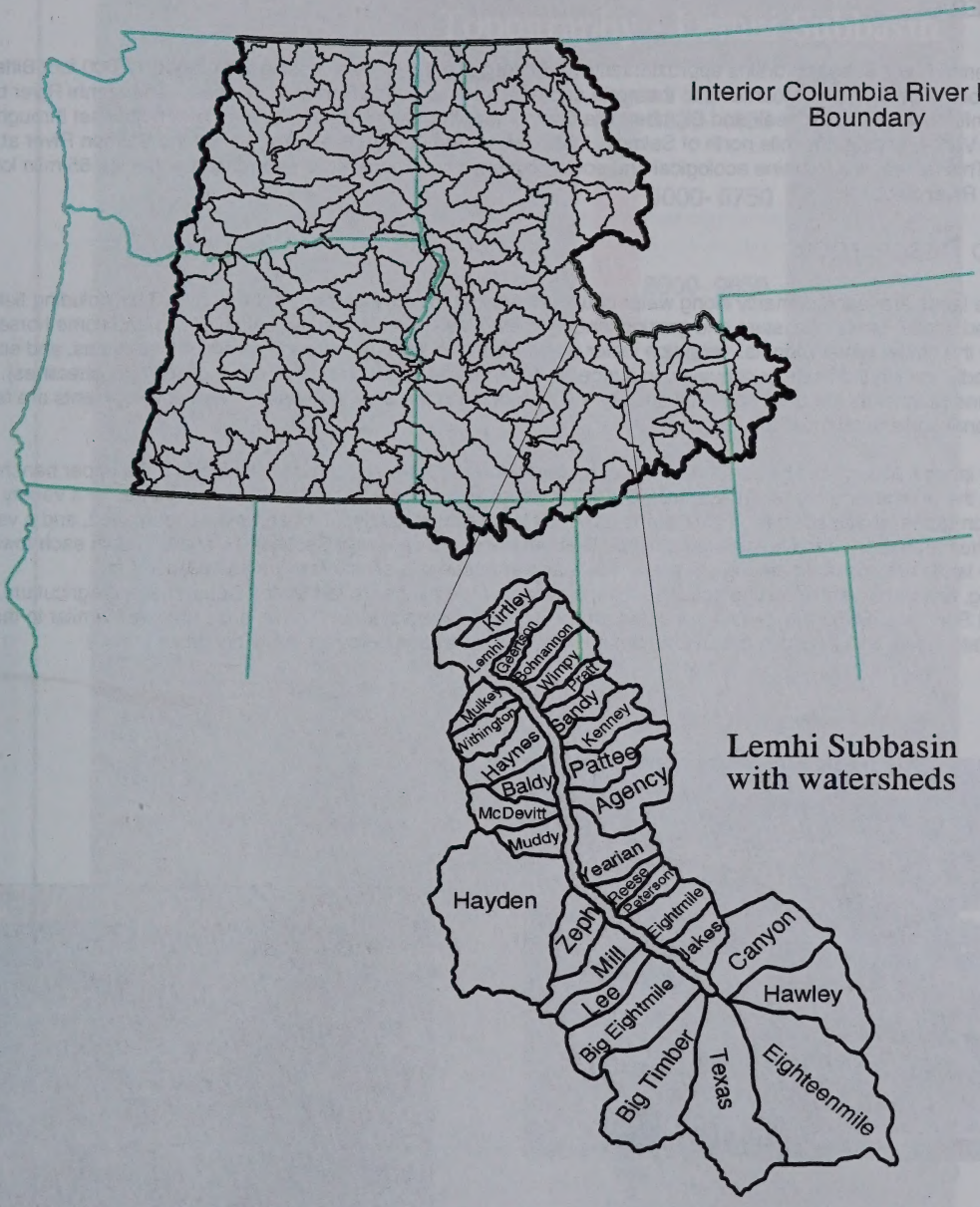
One of the goals of the Lemhi Subbasin Review was to *"reach out to others rather than waiting for them to come to us"*. To accomplish this goal several meetings were held with collaborators to solicit public input. The principle forum for public input was meetings of the Riparian Habitat Conservation Agreement Principal Working Group. This group consists of numerous government (federal and state) and private entities with a common vision for management of the resources of Lemhi County. It is the clearinghouse for natural resource issues and discussions within the area.

Other groups who provided input to the process include the Lemhi County Commissioners, Lemhi County Cattle and Horse Growers Association and Lemhi County Grazing Advisory Board.

In addition, one meetings was held at Fort Hall with the Shoshone-Bannock Tribes to solicit and understand tribal rights and interests in the Lemhi Subbasin as well as to collaboratively identify priorities.

All collaborators were regularly updated with written as well as verbal communications and continually invited to provide input to the process.

Location Map



Characterization

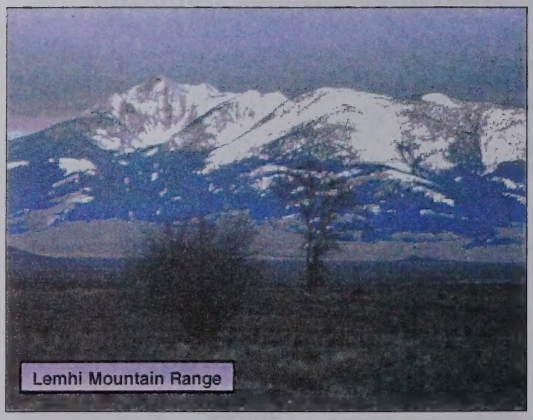
General

The Lemhi River Subbasin drains approximately 1,260 square miles encompassing the rugged 10,000 foot Bitterroot range of the Beaverhead Mountains to the north and east and the Lemhi Range to the west. The Lemhi River begins at the confluence of Texas Creek and Eighteenmile Creek, near the town of Leadore, and flows northwest through the Lemhi Valley, ending one mile north of Salmon, Idaho, where the Lemhi River empties into the Salmon River at 4,000 feet. This review will examine ecological and socio/economic conditions in 30 watersheds within the 65 mile long Lemhi River Subbasin.

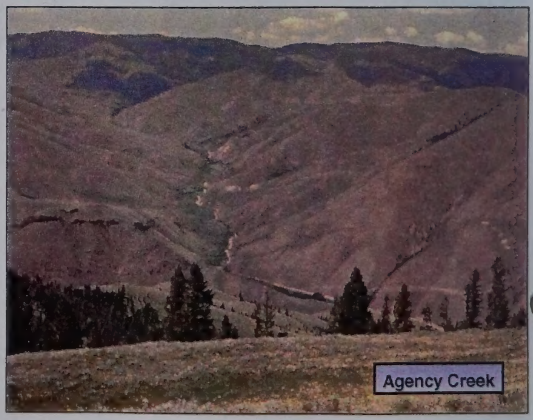
Land Description

Private lands are found primarily along water courses. Agriculture development is the primary use including fields of irrigated alfalfa, grass or pasture and grazing lands. These uses provide feed for cattle, sheep and some horses during the colder winter months. Irrigation water is diverted from streams, through diversion headgates, and either used for flood irrigating the fields or conveyed in a pipeline for sprinkler irrigation systems (handlines and wheelines). Home-sites and ranchettes are quite common and, as the population in the area increases, these developments are replacing traditional agricultural practices.

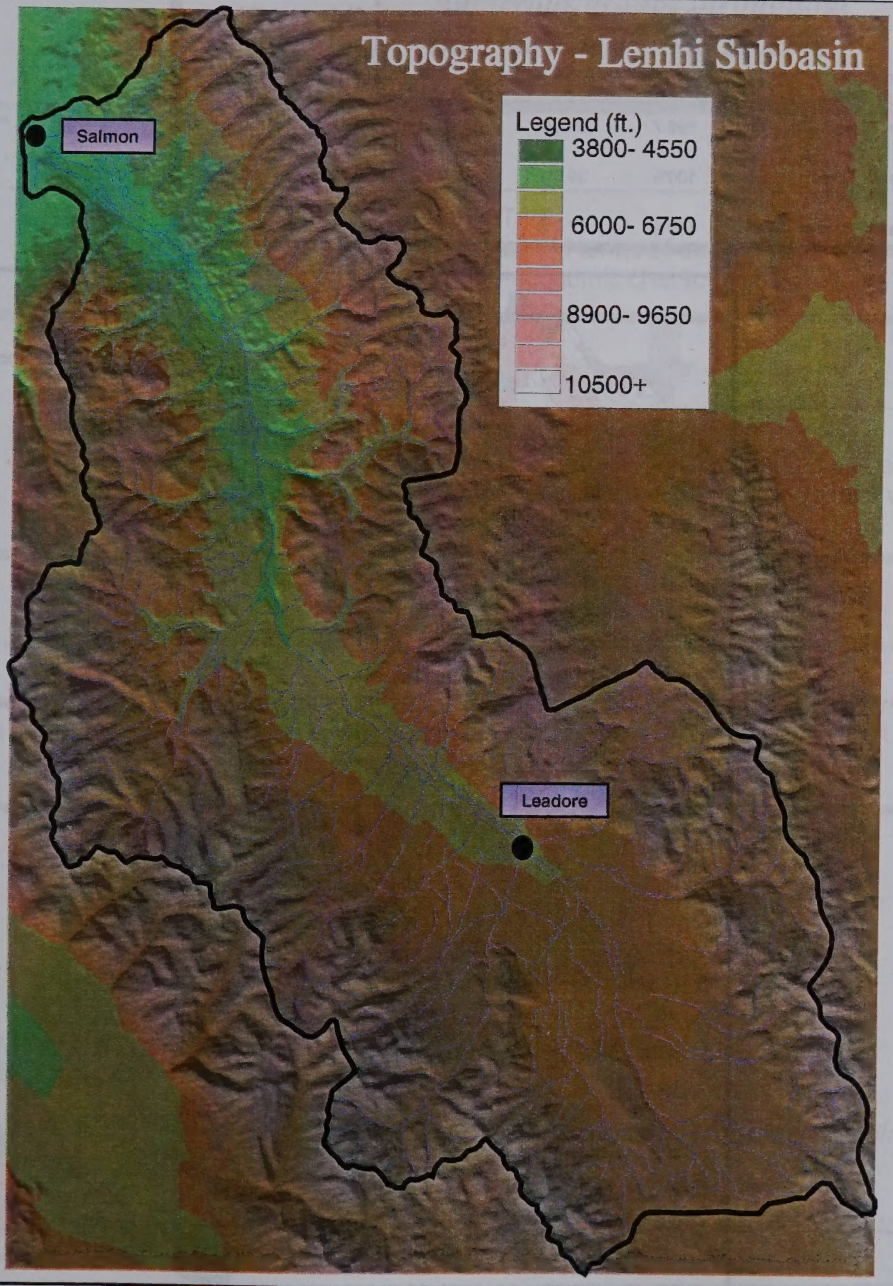
Public lands administered by the Bureau of Land Management (BLM) are generally located on the upper benches, above the private land areas. These are generally steeper and rougher terrain and provide habitat for a variety of game and non-game wildlife species. Public lands are used for livestock grazing, timber harvest, recreation, and a variety of other human uses. Lands administered by the State of Idaho are generally Sections 16 and 36 within each township. These lands are scattered among the public lands and are used in a similar fashion being leased for grazing, timber harvest or mining activities. Lands administered by the United States Department of Agriculture, Forest Service (USFS), are generally located on the higher forested slopes. These lands are used similar to the public and state lands, with livestock grazing, timber harvest and recreation being the most dominant uses.



Lemhi Mountain Range

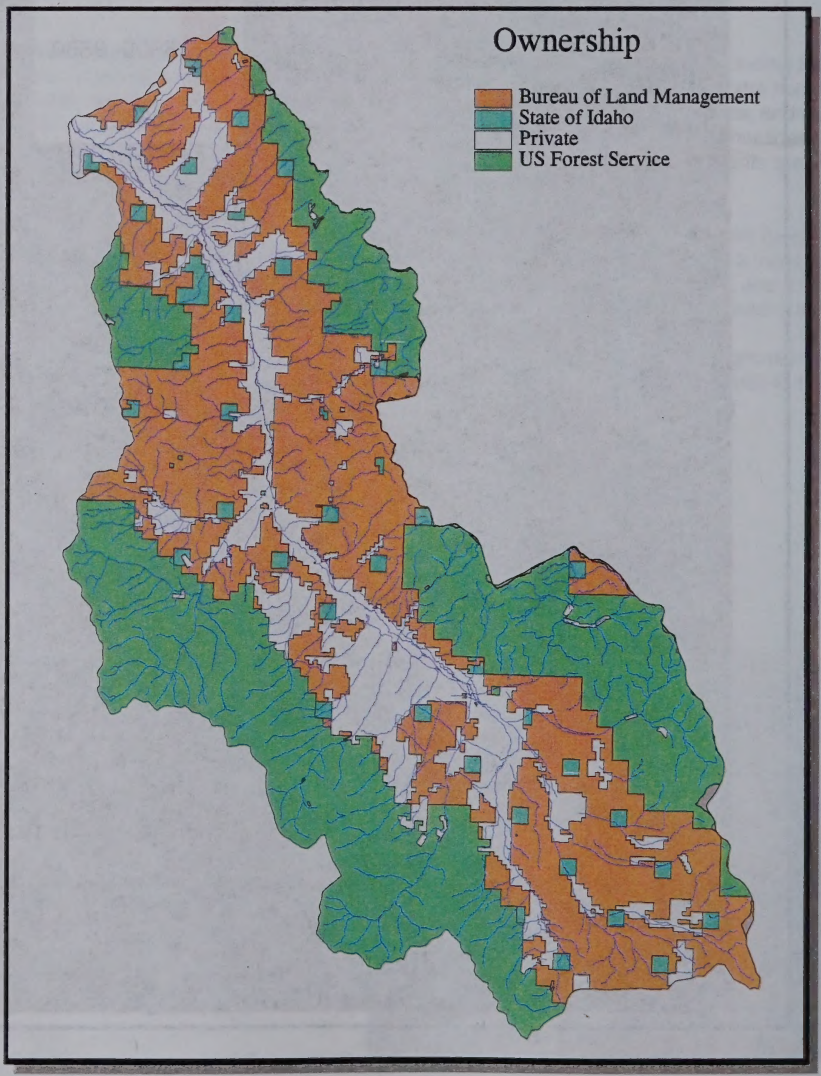


Agency Creek


Topography - Lemhi Subbasin
Legend (ft.)
3800- 4550
6000- 6750
8900- 9650
10500+
Salmon
Leadore

Characterization

	Total	BLM	USFS	State	Private
Subbasin Acres	807,464	315,275	320,140	24,906	147,143
Subbasin Stream Miles	896.7	247.0	359.3	32.6	257.8
% Subbasin Acres	100%	39.0%	39.7%	3.1%	18.2%
% Subbasin Stream Miles	100%	27.6%	40.1%	3.6%	28.7%



".....issues were identified by numerous groups throughout the characterization process "

CHARACTERIZATION PROCESS:

NARRATIVE

Describes the general setting of the subbasin in terms of ownership, biophysical (climate, soils, etc.) and socio-economic characteristics.

ISSUE IDENTIFICATION

Issues were identified by program based on public input, existing land use plan documentation, and professional knowledge of core team members. Issues were constantly refined as new information was obtained

INDICATOR VARIABLES

These are indicators of key attributes that drive ecosystem processes. They represent or are surrogates for the various issues within the subbasin. A rationale was written for each indicator variable linking it to the issues identified by each program.

STATUS, RISK AND OPPORTUNITY RATINGS

Each indicator variable was defined in terms of status, risk and opportunity. General definitions for these are found below:

***Status**: the condition of the indicator variable within a watershed or area in the subbasin relative to other watershed areas.*

***Risk**: the relative likelihood of an event (either natural or human-induced) degrading the current status as defined above.*

***Opportunity**: the relative potential to respond favorably to actions that would restore ecosystem health or provide for goods or services.*

Aquatic/Riparian

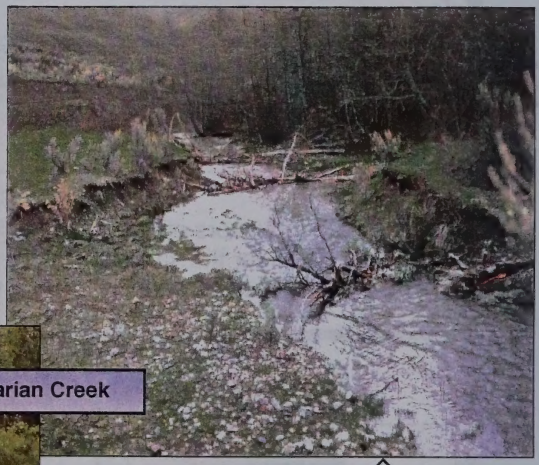
In general, most streams in the Lemhi Subbasin meet Idaho state water quality standards, however, in some streams, increased erosion rates, nutrient loading, instream temperatures and isolated heavy metal contamination have resulted in impaired water quality.

> *".....most streams in the subbasin meet Idaho state water quality standards"*

Major Aquatic/Riparian Issues:

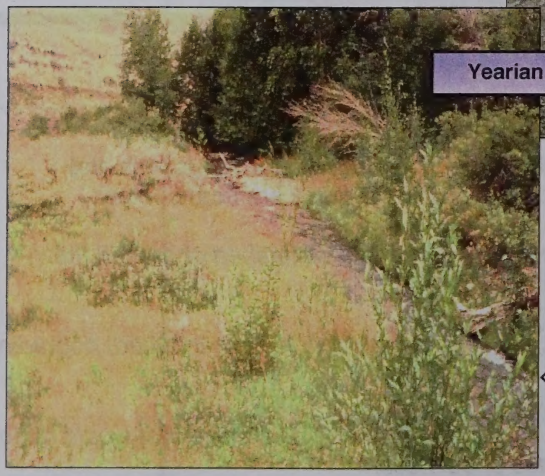
Altered Streams and riparian functionality

This affects fish and spawning habitat, pool quality, and flows during drought and high water. Riparian functionality is important for the health of the natural community and the long term economic stability of the Lemhi Valley.



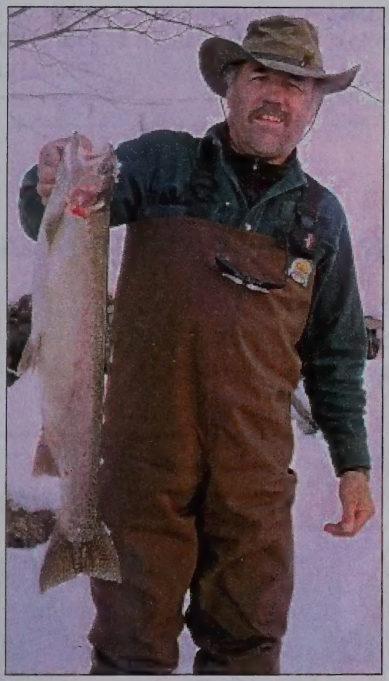
Yearian Creek

Before Management



After Management

Major Aquatic/Riparian Issues:



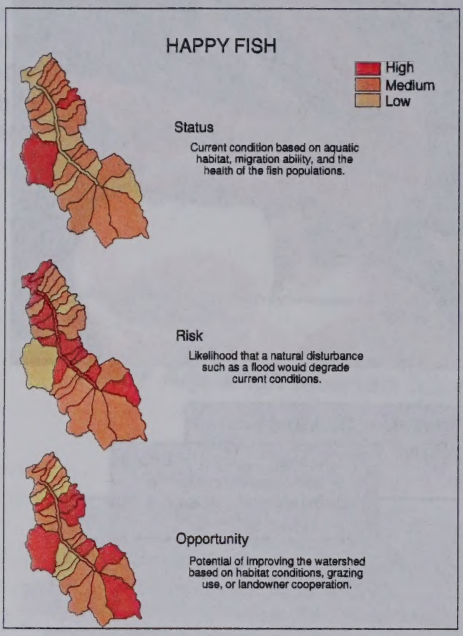
Altered Composition, Distribution and Status of Fish Populations.

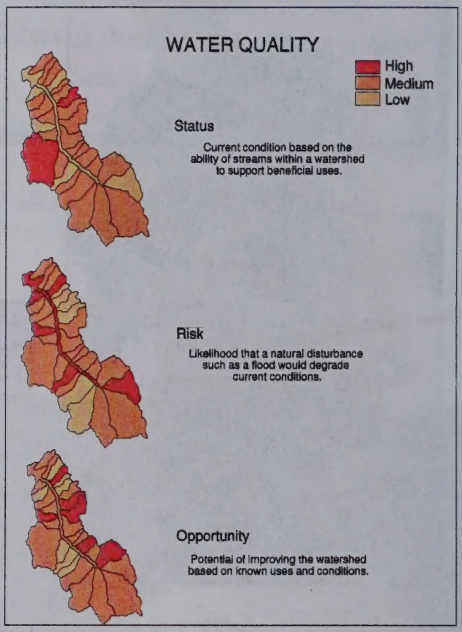
This has resulted in the listing of fish species under the Endangered Species Act.

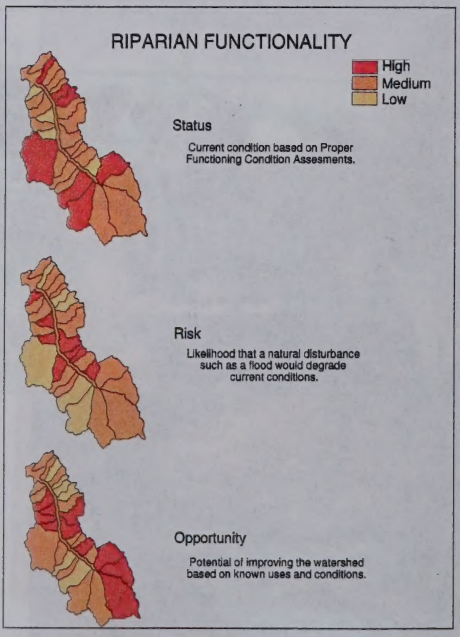
Seasonally Disrupted Water flow between Tributary Streams and the Lemhi River.

This has resulted in the elimination of fish migration corridors, reducing available habitat and altering life history patterns, as well as altering instream flows, riparian plant communities, and modifying sediment and wood transport processes.

Aquatic/Riparian - Indicator Variables


HAPPY FISH
High
Medium
Low
Status
Current condition based on aquatic habitat, migration ability, and the health of the fish populations.
Risk
Likelihood that a natural disturbance such as a flood would degrade current conditions.
Opportunity
Potential of improving the watershed based on habitat conditions, grazing use, or landowner cooperation.


WATER QUALITY
High
Medium
Low
Status
Current condition based on the ability of streams within a watershed to support beneficial uses.
Risk
Likelihood that a natural disturbance such as a flood would degrade current conditions.
Opportunity
Potential of improving the watershed based on known uses and conditions.


RIPARIAN FUNCTIONALITY
High
Medium
Low
Status
Current condition based on Proper Functioning Condition Assesments.
Risk
Likelihood that a natural disturbance such as a flood would degrade current conditions.
Opportunity
Potential of improving the watershed based on known uses and conditions.

Forest

Forest conditions have experienced accelerated change in the last 50-100 years due, for the most part, to the lack of fire playing its natural role.

> *"Forests show ecological trends similar to the Columbia River Basin..."*

As a result, the subbasin has experienced the following:

- *Tree density (# per acre) has increased.*
- *Species and structural diversity has decreased.*

Major Forest Issues:

Larger and more severe fires than experienced previously, possibly causing risk of property loss and personal injury. Larger fires could lead to increased sediment delivery to streams and an invasion of noxious weeds.

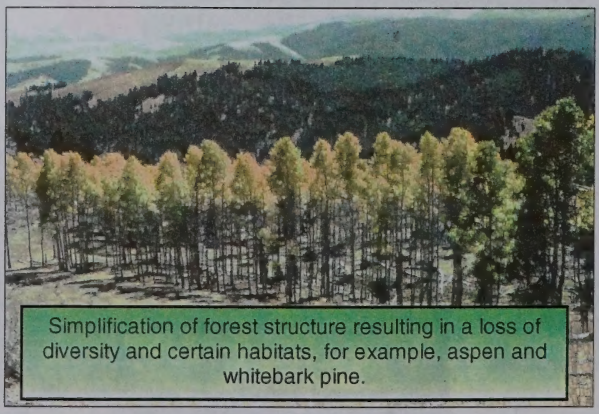
Visual quality would be compromised and recreational options decreased

Shifts in water yields

Major Forest Issues:

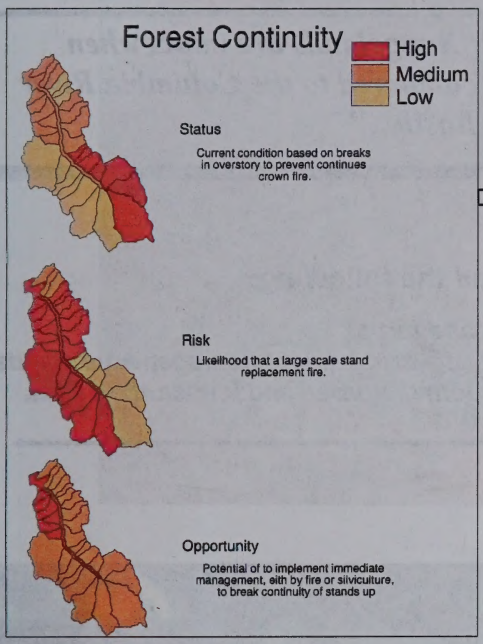
Increase in frequency, duration, and magnitude of insect and disease activity

Decreased availability of diverse forest resources for commodity and tribal use

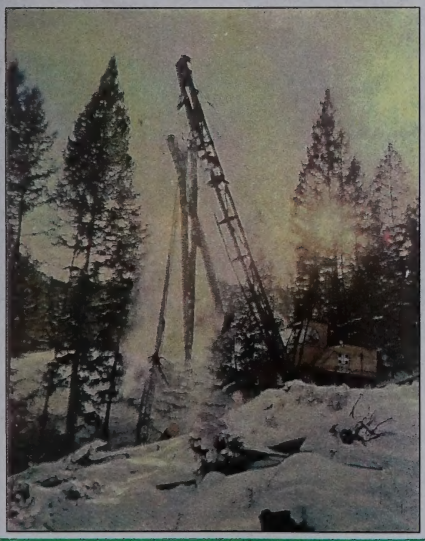


Simplification of forest structure resulting in a loss of diversity and certain habitats, for example, aspen and whitebark pine.

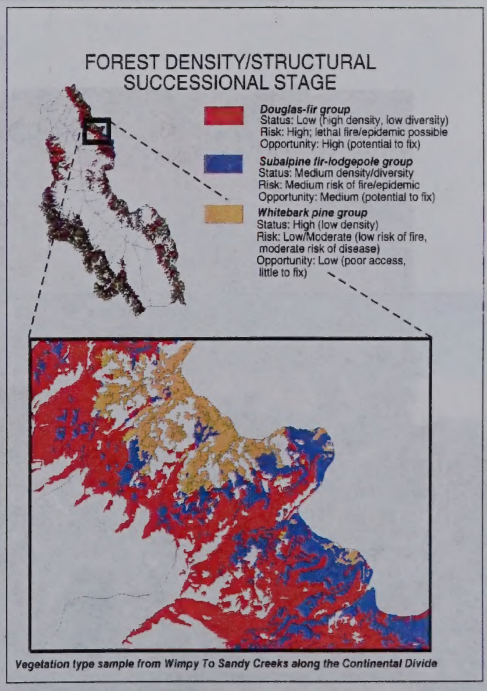
Forest - Indicator Variables


Forest Continuity
High
Medium
Low
Status
Current condition based on breaks in overstory to prevent continues crown fire.
Risk
Likelihood that a large scale stand replacement fire.
Opportunity
Potential of to implement immediate management, eith by fire or silviculture, to break continuity of stands up

Continuous crown fire potential in the Reese Creek Subwatershed, Yearian Creek Watershed.



Skyline logging operation in Cow Creek Subwatershed, Agency Creek Watershed.


FOREST DENSITY/STRUCTURAL SUCCESSIONAL STAGE
Douglas-fir group
Status: Low (high density, low diversity)
Risk: High; lethal fire/epidemic possible
Opportunity: High (potential to fix)
Subalpine fir-lodgepole group
Status: Medium density/diversity
Risk: Medium risk of fire/epidemic
Opportunity: Medium (potential to fix)
Whitebark pine group
Status: High (low density)
Risk: Low/Moderate (low risk of fire, moderate risk of disease)
Opportunity: Low (poor access, little to fix)

Vegetation type sample from Wimpy To Sandy Creeks along the Continental Divide

Rangelands

Rangelands within the Lemhi Subbasin are relatively intact when compared to the rest of the northwest and have made significant improvements in the last 100 years. However, less than desired conditions still exist on some areas primarily due to the lack of fire and effects of historical livestock grazing.

> ***"Rangelands are intact when compared to the Columbia River Basin..."***

As a result the subbasin has experienced the following:

- ***A reduction in herbaceous species (grass and forbs).***
- ***A decrease in diverse structural stages of sagebrush (more homogeneous stands).***
- ***An increase in noxious weed invasion on both disturbed and undisturbed sites.***

Major Rangeland Issues:

Decreased availablility of rangelands for commodity uses (eg. livestock grazing)

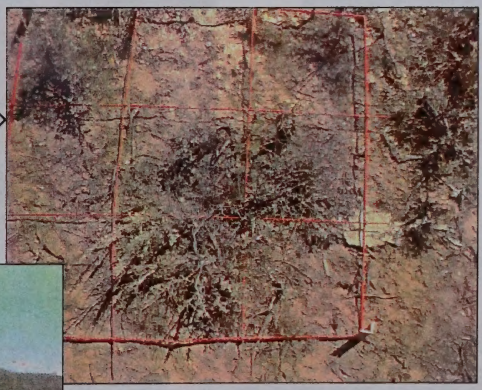
Invasion of noxious weeds into undisturbed sites

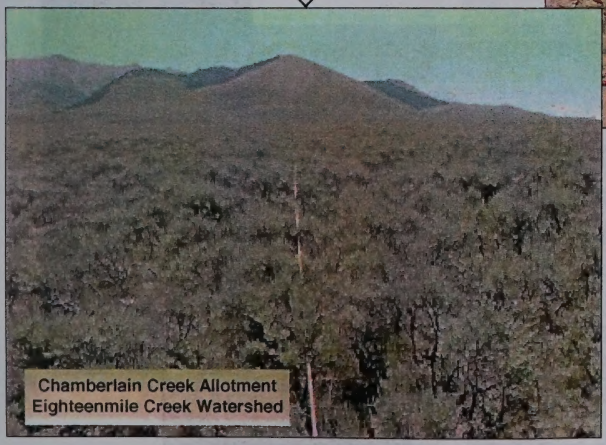
Major Rangeland Issues:

Larger and more severe fires than historically.

Increased erosion into streams due to decreased grass/forb cover

Simplification of rangeland sagebrush structure





Chamberlain Creek Allotment
Eighteenmile Creek Watershed

Weeds

The Lemhi Subbasin is relatively weed free when compared to the rest of the northwest. However, there are significant threats to the area which could seriously reduce public and private land productivity, commodity and tribal uses, and native species.

"Weed species are present but do not occupy large acreages..."

Major Weed Issues:

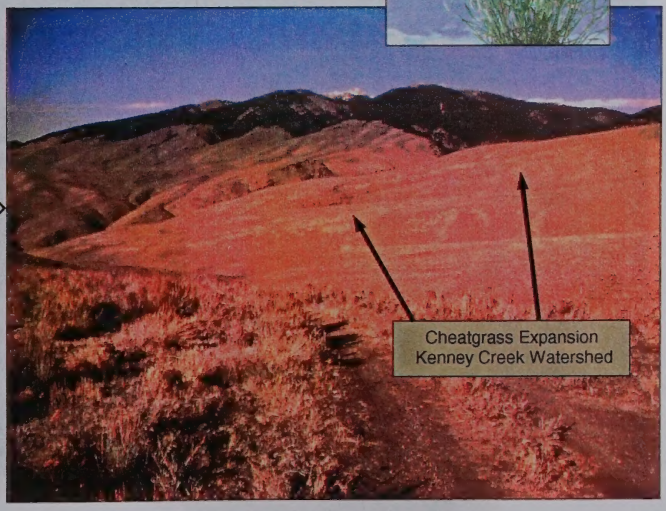
Leafy Spurge: the Leadore area is a concentration area in the subbasin. Two other concentration areas exist in Lemhi County: Carmen-Badger Springs and the Salmon River corridor. These areas have the potential to invade the subbasin. Once established more than an acre in size, infestations are very difficult to kill with herbicides.

Spotted Knapweed: dominates some rangelands in the northern part of the subbasin and is spreading on private land and roadways in the southern part of the subbasin. Now beyond the level that can be contained by only spraying roadsides

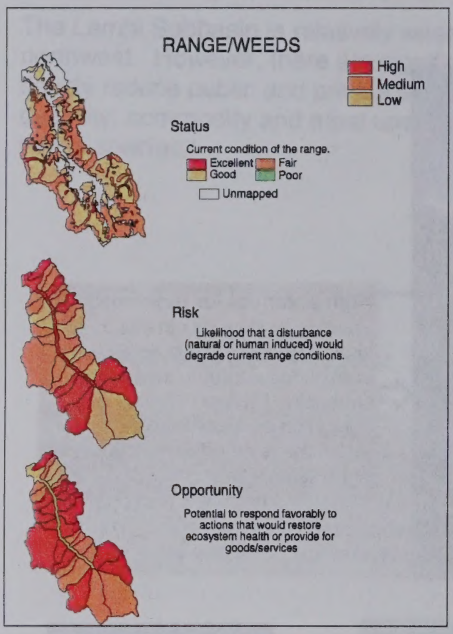
Major Weed Issues:

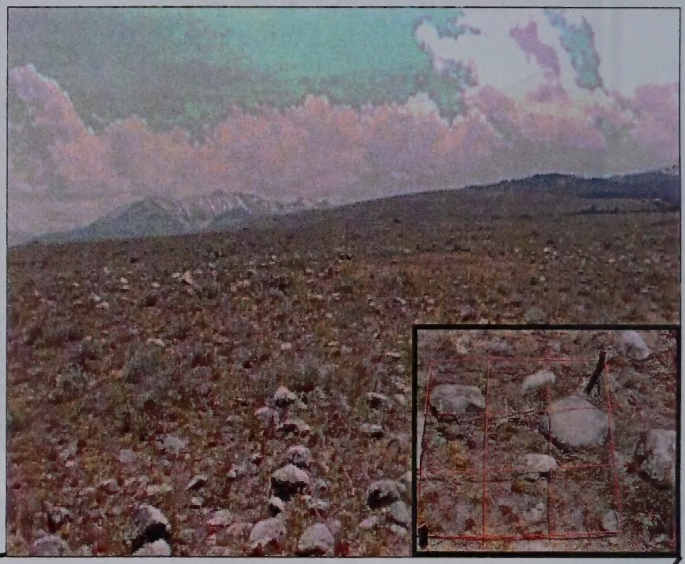
High potential for new weed species (yellow star thistle, rush skeletonweed, russian knapweed, purple loosestrife) to invade the subbasin. Private citizens need education on weed identification since that is an effective means of eradication.

Cheatgrass is established in disturbed and poor condition areas and **has the potential to expand**, although it does not dominate here as it does in many parts of the northwest.



Rangeland/Weeds - Indicator Variable





Range Condition Pre-Management

Range Condition Post-Management

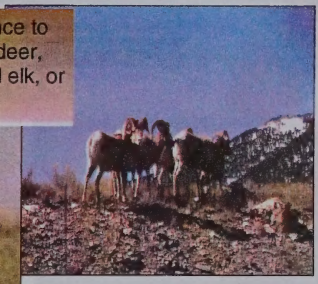
Wildlife

Wildlife populations within the Lemhi Subbasin are relatively intact compared to the rest of the northwest. However, several changes have occurred during the last 100 years affecting wildlife species within the area.

"The subbasin provides important wildlife habitat ...."

Major Wildlife Issues:

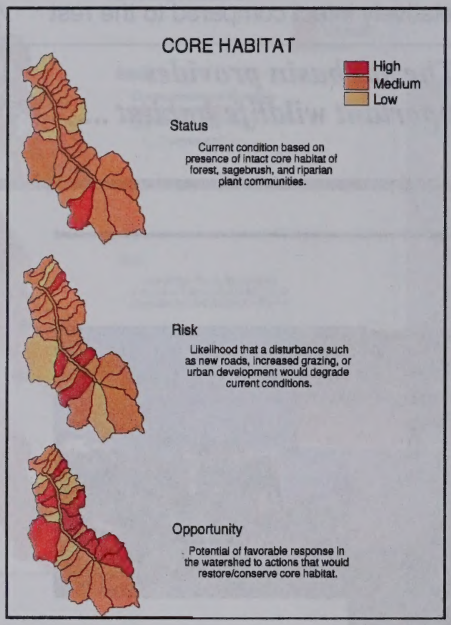
An increase in the amount of disturbance to wildlife species such as wintering elk, deer, sage grouse, calving/fawning deer and elk, or migrating elk and forest carnivores

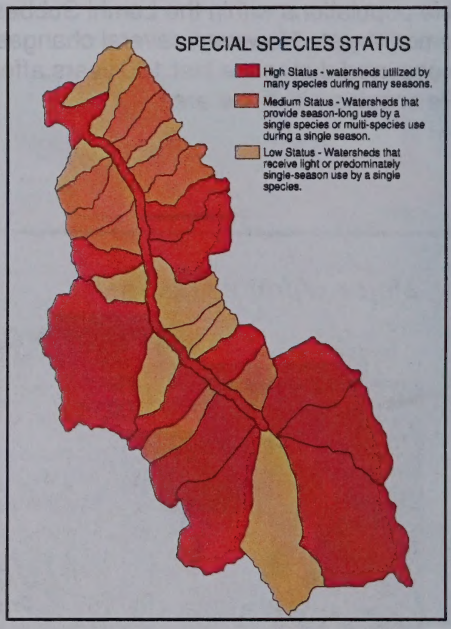


A reduction in vegetative diversity and structure in all vegetation communities.

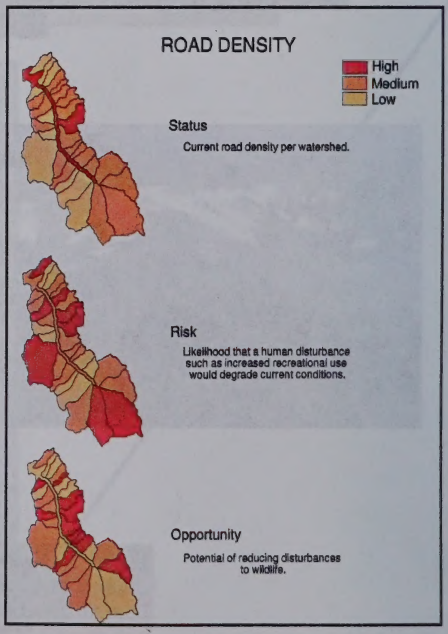
Loss of connectivity of habitat created by increased access in forested vegetation, urban and agricultural development in sagebrush/grasslands, and shrub removal in riparian zones.

Wildlife - Indicator Variables


CORE HABITAT
High
Medium
Low
Status
Current condition based on presence of intact core habitat of forest, sagebrush, and riparian plant communities.
Risk
Likelihood that a disturbance such as new roads, increased grazing, or urban development would degrade current conditions.
Opportunity
Potential of favorable response in the watershed to actions that would restore/conserve core habitat.


SPECIAL SPECIES STATUS
High Status - watersheds utilized by many species during many seasons.
Medium Status - Watersheds that provide season-long use by a single species or multi-species use during a single season.
Low Status - Watersheds that receive light or predominately single-season use by a single species.

Potential loss of core habitat in the upper Lemhi River Valley.



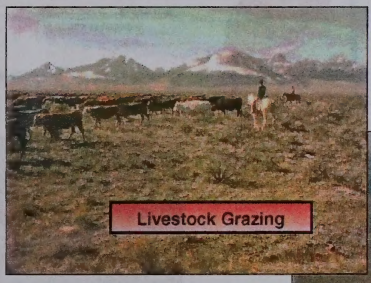
Human Uses

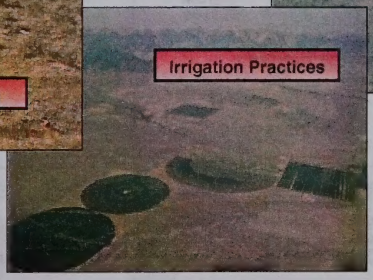
The subbasin has a long history of human use. The Shoshone-Bannock Tribes traditionally used these lands until 1907. The tribes retain aboriginal rights to use their traditional areas.

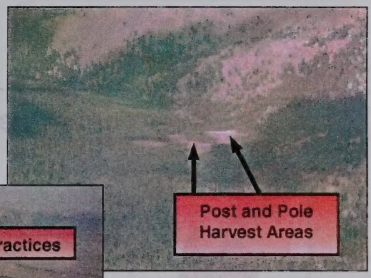
The people of the subbasin depend on livestock grazing, timber, mining, local subsistence uses, and irrigation for a living. Changes in management on federal lands may significantly effect the local economy.

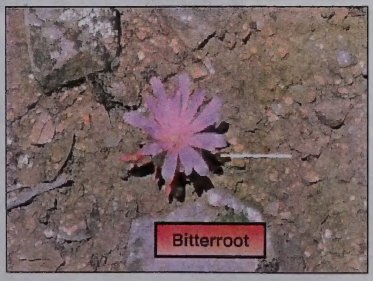
> ***"People of the subbasin depend on livestock grazing, timber harvest, irrigation water, and recreation for their livelihood ..."***

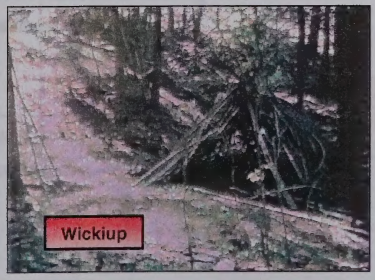
Major Human Use Issues:







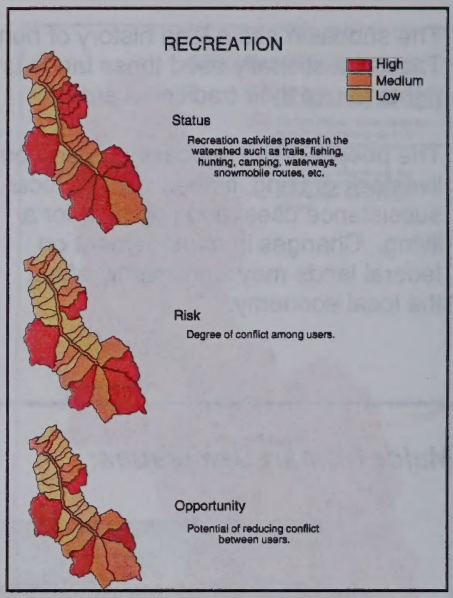


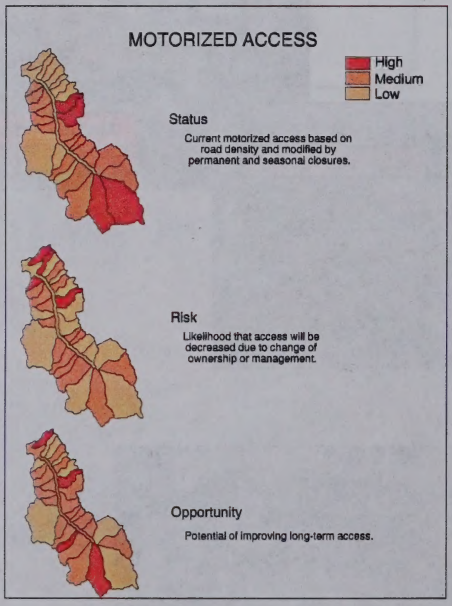


Tribal interests in federal agency managed lands include traditional cultural practices, ethnohabitats, various resources, ecosystem health, communally valued sacred and legendary places.

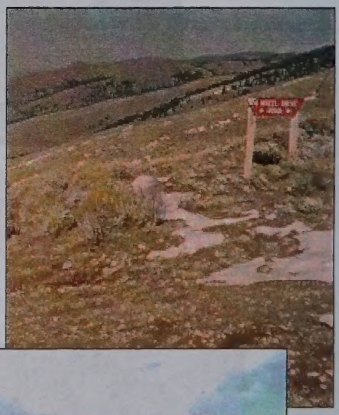
Human Uses - Indicator Variables

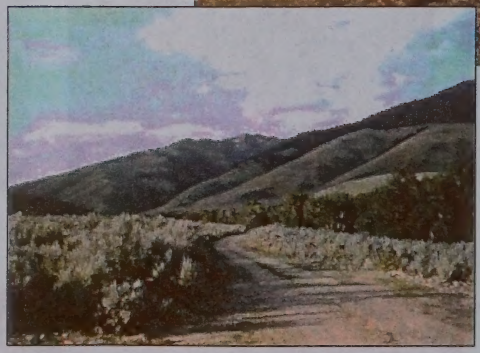
Camping at Geertson Lake




MOTORIZED ACCESS
High
Medium
Low
Status
Current motorized access based on road density and modified by permanent and seasonal closures.
Risk
Likelihood that access will be decreased due to change of ownership or management.
Opportunity
Potential of improving long-term access.

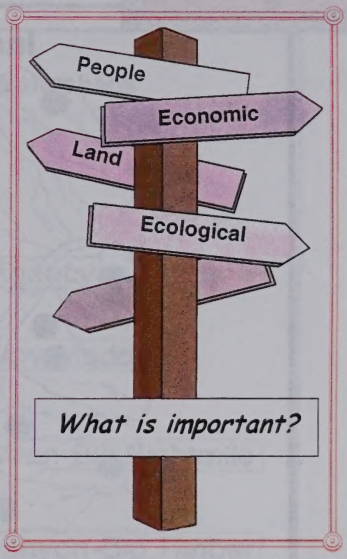
Roads Typical of the Subbasin



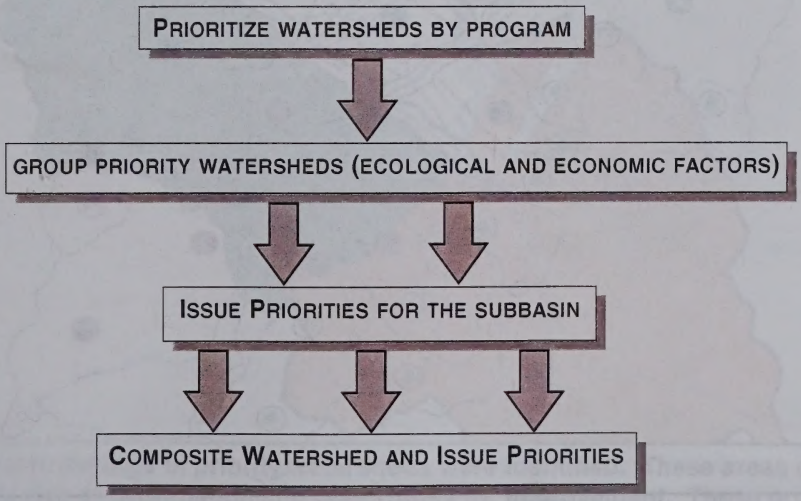


Priorities

Determining priorities is the key to the subbasin review process. Priorities within the subbasin were determined using a collaborative process between all interested parties. The risk of degrading existing conditions and the opportunity for improving them were key factors in determining priorities within the subbasin. All priorities were ranked relative to each other and based on how fast improvement needed to be made. Ecological priorities were determined first, then an economic filter was placed on them to come up with an overall priority rating.



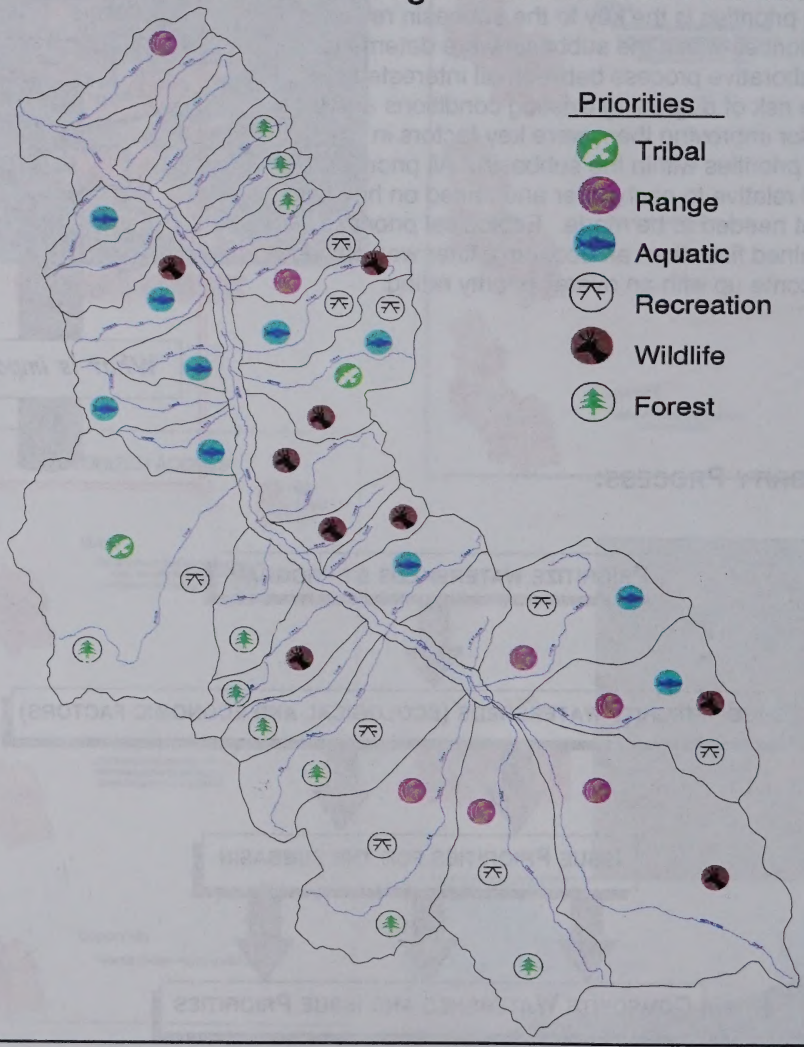
Priority Process:


Prioritize watersheds by program
Group priority watersheds (ecological and economic factors)
Issue Priorities for the subbasin
Composite Watershed and Issue Priorities

Priorities

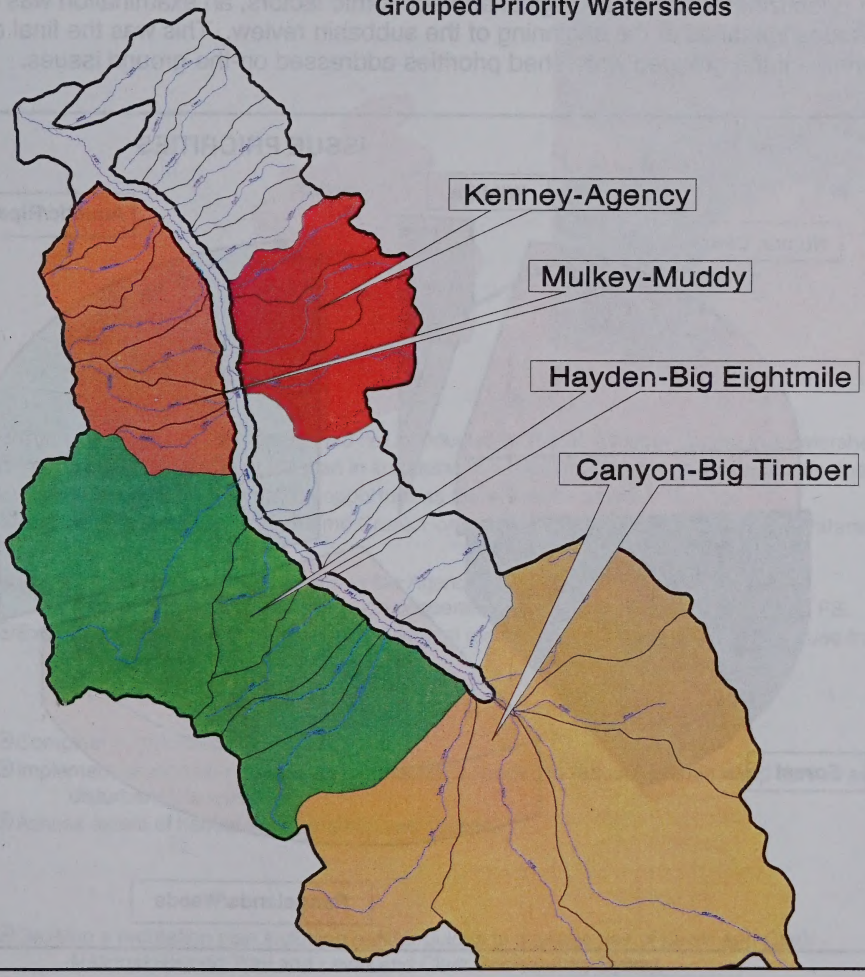
Step One:

Individual Program Watershed Priorities



Each program identified their highest priority watersheds within the subbasin. The watersheds chosen generally had the highest risk for degradation of existing conditions but also had the highest opportunity for management.

Step Two:



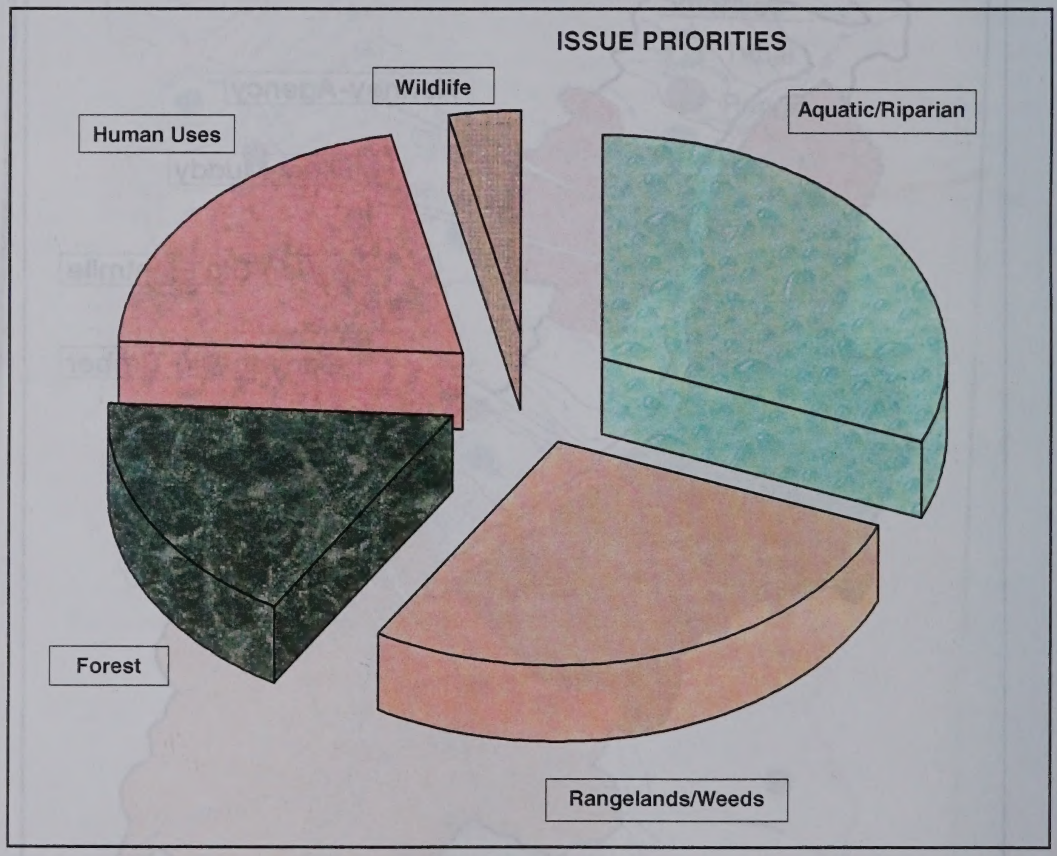
Logical groupings of priority watersheds were identified. These areas contained similar risk of degradation and opportunity for improvement. These groupings were evaluated based on ecological and economic factors. Four main groupings were identified:

Kenney-Agency, Mulkey-Muddy, Canyon-Big Timber, Hayden-Big Eightmile

Priorities

Step Three:

After prioritizing based on ecological and economic factors, an examination was made of the issues identified at the beginning of the subbasin review. This was the final check to determine if the grouped watershed priorities addressed on-the-ground issues.

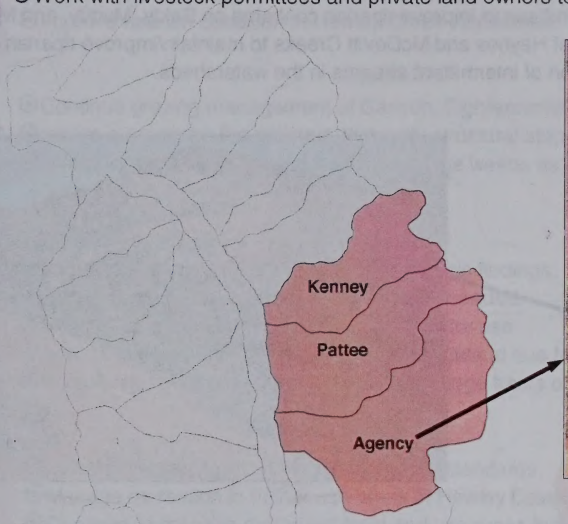


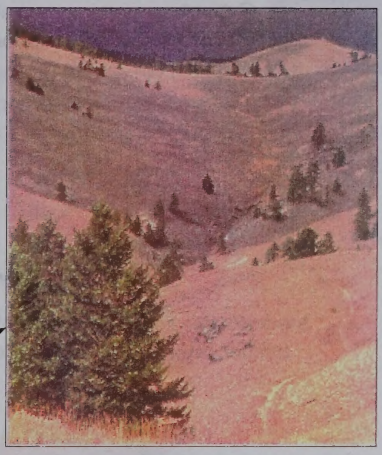
This ranking shows that issues are spread evenly across the subbasin and validates choosing several priority geographic areas for management focus. No issue ranked higher than any other. The issue with the lowest percent (wildlife) is actually well represented because wildlife species depend on habitat for survival. That habitat is represented by the Forest, Rangelands/Weeds, and Aquatic/Riparian Programs. It is also interesting to note that Human Uses which includes economic dependence and Tribal concerns rated almost equal with more ecologically oriented programs. This validates the management approach used in the Lemhi Subbasin of balancing ecosystem health with the economic needs of the local citizens.

Kenney-Agency Priorities (1999-2004)

Aquatic-Riparian

- ⊙Improve Fish Passage/Migration between tributaries and the Lemhi River.
- ⊙Work with livestock permittees and private land owners to improve riparian conditions.





Forest

- ⊙Continue harvesting and prescribed fire in Douglas-fir stands (Copper Queen Subwatershed).
- ⊙Initiate stand replacement fire plan in subalpine fir-lodgepole (Copper Queen Subwatershed).
- ⊙Explore education/interpretation opportunities for recreation users.
- ⊙Restore whitebarkpine in the Flume Creek/Horseshoe Bend Creek (Agency Creek Watershed).

Rangelands /Weeds

- ⊙Continue to improve riparian areas in the Agency Creek, Warm Springs/Pattee, and Kenney Creek Allotments through cooperative management between BLM and FS.
- ⊙Explore educational opportunities about natural resources tiered to increased visitor use from the Lewis and Clark Bicentennial.

Wildlife

- ⊙Complete a motorized roads/trail inventory.
- ⊙Implement seasonal/permanent road closures if needed to reduce noxious weed spread and disturbance to wildlife.
- ⊙Assess extent of habitat fragmentation and causes.

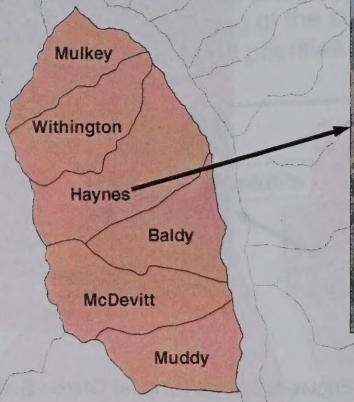
Human Uses

- ⊙Develop a recreation plan including oufitter/guides to manage use of Lewis and Clark National Historic Trail and Lewis and Clark Backcountry Byway.
- ⊙Continue to pursue land exchange opportunities for additional public access.
- ⊙Manage for post/poles and firewood
- ⊙Use timber harvest to open up views along the L&C Backcountry Byway.

Mulkey-Muddy Priorities (1999-2004)

Aquatic-Riparian

- ⊙Work with livestock permittees to improve riparian concerns on Baldy, Muddy, and Mulkey Creeks.
- ⊙Continue management of Haynes and McDevitt Creeks to maintain/improve riparian conditions.
- ⊙Improve riparian condition of intermittent streams in the watersheds.



Forest

- ⊙Inventory condition and develop plans for aspen stands and riparian woodlands.
- ⊙Encourage continued post and pole, houselog, sawtimber, and firewood use.
- ⊙Reintroduce prescribed fire and tree thinning that also meets wildlife, recreation and Native American needs.

Rangelands /Weeds

- ⊙Implement grazing systems for improvement of Baldy, Muddy and Mulkey Creeks.
- ⊙Maintain management of Haynes and McDevitt Creek.
- ⊙Manage grazing to improve aspen stands.
- ⊙Coordinate management between BLM, FS and State Lands where possible.

Wildlife

- ⊙Monitor lynx habitat for disturbance from human uses include ORV and snowmobiles for baseline data.
- ⊙Inventory for potential Canadian lynx denning sites, and monitor visitor use on existing roads for baseline information.

Human Uses

- ⊙Focus on economic and subsistence uses by maintaining grazing and managing for timber, firewood, post and pole use.
- ⊙Maintain roads to continue existing levels of access.

Canyon-Big Timber Priorities (1999-2004)

Aquatic-Riparian

- Reconnect tributaries to the Lemhi River (Canyon, Big Timber, Hawley, and Texas Creeks).
- Improve water quality through riparian improvement on private and federal land.
- Improve riparian condition in Hawley Creek Watershed.

Rangelands /Weeds

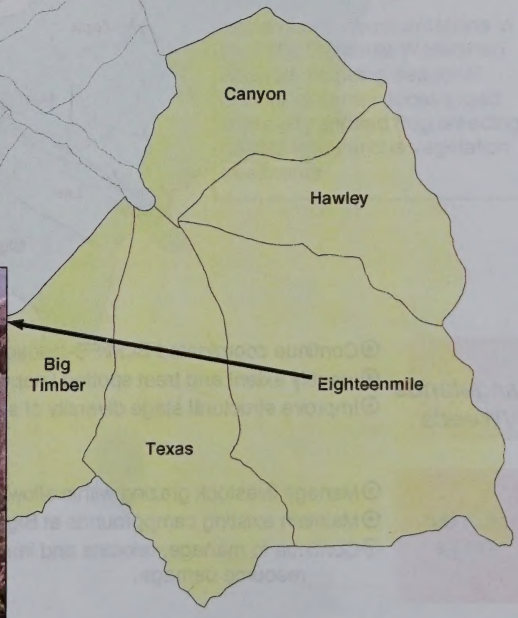
- Continue grazing management of Canyon, Eighteenmile, and Big Timber Creeks.
- Initiate a prescribe fire program to modify structural stages of sagebrush.
- Inventory private and federal land for noxious weeds as coordinated through the Lemhi County Weed Plan.

Wildlife

- Implement Hawley Creek Watershed Analysis findings.
- Implement seasonal/permanent closures if needed.
- Monitor existing road/area closures and visitor use.
- Assess wildlife habitat fragmentation in rangeland due to urban/agriculture development.
- Pursue land exchanges that would secure large tracts of sagebrush or riparian habitat.

Human Uses

- Manage livestock grazing within allowable standards.
- Manage recreation in higher use areas in Hawley Creek and Meadow Lake.
- Continue to manage motorized trails and use areas including stream crossings so they can still be used for access.
- Improve coordination of land management in and around Gilmore townsite with the county and private landowners..



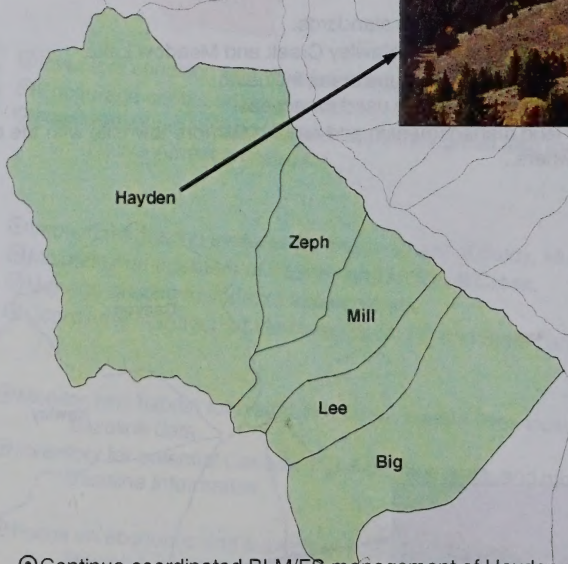
Hayden-Big Eightmile Priorities (1999-2004)

Aquatic-Riparian

- ⊙Continue management of Hayden Creek Watershed.
- ⊙Inventory fish species in Hayden Creek to document location of bull trout, chinook salmon, steelhead, and westslope cutthroat and possible location of brook trout.
- ⊙Reconnect Big Eightmile and Mill Creeks with the Lemhi River.

Forest

- ⊙Implement management outlined in the Hayden Creek Watershed Analysis.
- ⊙Reduce stand density of low elevation Douglas-fir through prescribed fire or harvest.
- ⊙Develop and implement a prescribed natural fire (PNF) plan for the Douglas-fir and subalpine fir/lodgepole types.



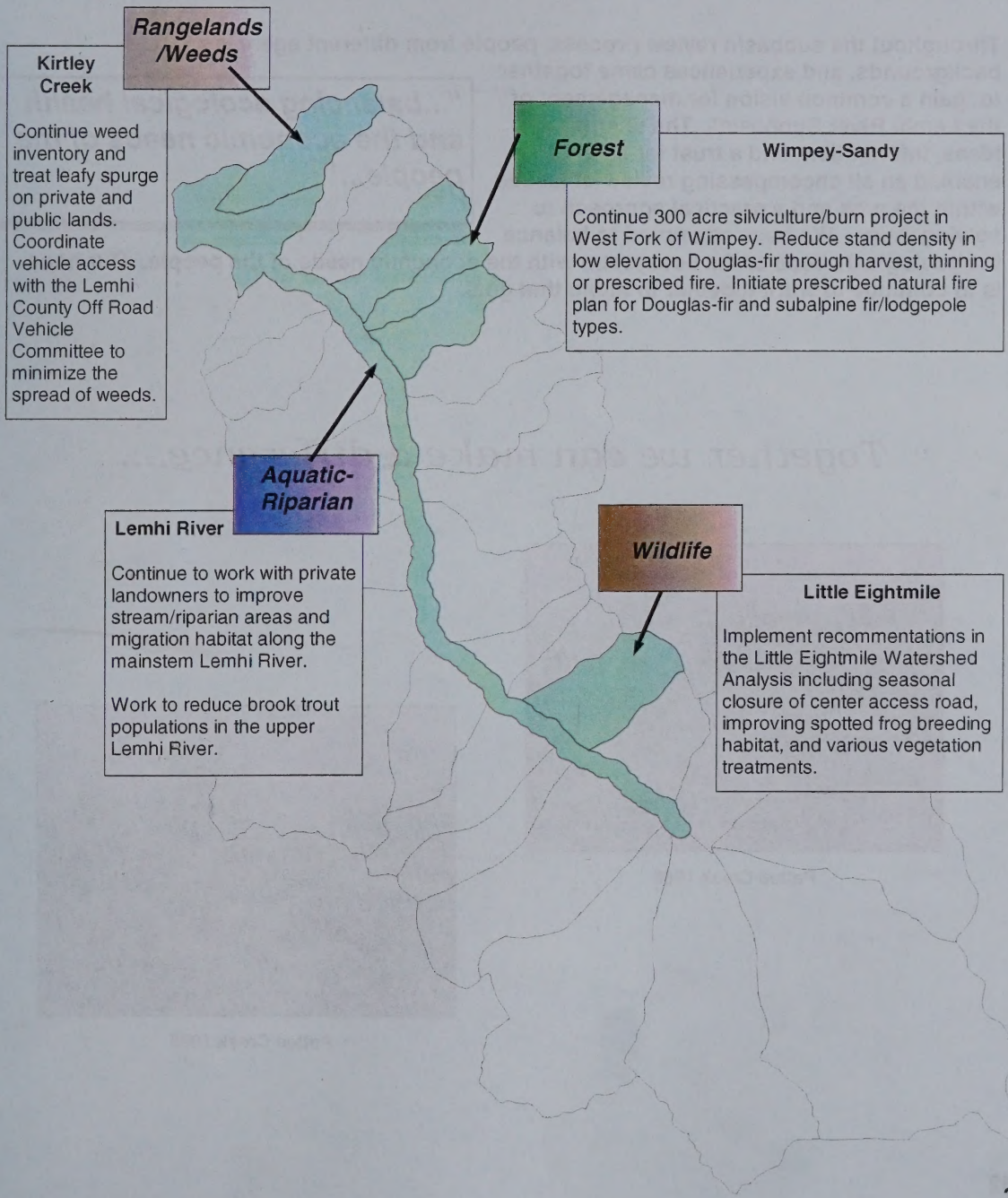
Rangelands /Weeds

- ⊙Continue coordinated BLM/FS management of Hayden and Mill/Zeph Creek Watersheds.
- ⊙Identify extent and treat spotted knapweed infestations within the Hayden Creek Watershed.
- ⊙Improve structural stage diversity of sagebrush through prescribed burning or PNF.

Human Uses

- ⊙Manage livestock grazing within allowable standard.
- ⊙Maintain existing campgrounds at Big Eightmile and Bear Valley Creeks.
- ⊙Continue to manage, relocate and improve motorized trails for continued access and reduced resource damage

Watershed Priorities by Program (1999-2004)


Rangelands /Weeds
Kirtley Creek
Continue weed inventory and treat leafy spurge on private and public lands. Coordinate vehicle access with the Lemhi County Off Road Vehicle Committee to minimize the spread of weeds.
Forest
Wimpey-Sandy
Continue 300 acre silviculture/burn project in West Fork of Wimpey. Reduce stand density in low elevation Douglas-fir through harvest, thinning or prescribed fire. Initiate prescribed natural fire plan for Douglas-fir and subalpine fir/lodgepole types.
Aquatic-Riparian
Lemhi River
Continue to work with private landowners to improve stream/riparian areas and migration habitat along the mainstem Lemhi River.
Work to reduce brook trout populations in the upper Lemhi River.
Wildlife
Little Eightmile
Implement recommentations in the Little Eightmile Watershed Analysis including seasonal closure of center access road, improving spotted frog breeding habitat, and various vegetation treatments.

Summary

Throughout the subbasin review process, people from different agencies, backgrounds, and experiences came together to 'gain a common vision for management of the Lemhi River Subbasin'. The sharing of ideas, information, and a trust for each other enabled an all encompassing review of issues within the area and a practical approach to solving them. We have attempted to balance the ecological needs of the ecosystem with the economic needs of the people. Our hope is to continue to work together to attain that goal.

> ***"...balancing ecological health and the economic needs of the people..."***

Together we can make a difference....

Pattee Creek 1988

Pattee Creek 1996

1 ❒ SUBBASIN REVIEW

Dealing with Broad-Scale, Multi-jurisdictional Issues

Martha Hahn - Elaine Zielinski

2 ❒ BROAD-SCALE, MULTI-JURISDICTIONAL ISSUES

- Forest Health
- Weeds
- T&E Listings
- Urban/Rural Interface
- Water Quality

3 ❒ Addressing these issues means we must work through:

- Involving multiple jurisdictions (intergov-ernmental & interagency collaboration)
- Complex prioritization problems
- Coordinating staff and budget allocations
- Dealing with cumulative effects

4 ❒ OBJECTIVES OF SUBBASIN REVIEW PROCESS

- Provide an understanding of how the review area fits into the broader-scale context
- Assess resource conditions, risks & opportunities at the mid scale
- Provide a priority structure and analytical support for conducting finer scale activities
- Provide support for planning and NEPA updates & sufficiency checks
- More effective consultation

5 ❒ See Figure 1. Subbasin Review Process

6 ❒ SUBBASIN REVIEW PRODUCTS

- Organized review of existing information from all collaborating sources
- Collaboratively developed array of mid-scale issues
- Description of mid-scale character (status, risk, opportunity)
- Recommendations and priorities for cooperative management activity at mid and finer scales

7 LINKAGES TO OTHER BLM SYSTEMS

- Planning
  - RMPs
  - Activity and Project Plans
- NEPA
  - Updating existing NEPA documentation
  - Source information for future NEPA analysis
  - Cumulative effects
- Budget/Staff Allocation - AWP

8 SUMMARY

- We are dealing with many issues on a broad scale
- Addressing these issues requires that we work with other agencies, levels of government, tribes and private interests
- We must focus on collaborative processes, such as Subbasin Review, to help meet this challenge